

their employment at a certain hour during the day, and attend alternately at night. He saw by a paragraph in the programme that it was proposed not to construct prisons with more than three stories, including the ground-floor. He thought, however, that when the number of prisoners amounted to 700 or 800, it would be more convenient to have four stories than very long wings. With respect to the attending of divine worship, a mode existed in Pentonville and other places, by which all the prisoners might proceed separately to the church or chapel, and hear and see the person officiating, without being seen by any one except by him. The time occupied in proceeding to and departing from divine service was seven minutes respectively. With respect to the size of cells, he thought that, as a general rule, they should be about 13 feet long, 7 broad, and from 8 to 9 feet high. Of course it would be necessary sometimes to make larger cells for special purposes.

The following are some of the propositions, which were agreed in *prima con*.

The buildings and exercise ground should be disposed so as to receive the rays of the sun, and be sheltered from rain and the north wind. 2nd. The destination of a prison must in some sort determine its internal arrangement. If it is to be a penal prison, none but convicts of one sex should be placed in each, and the number should never surpass the maximum of 500, although the congress were of opinion that a lesser number would be better. If it is to be a preventive establishment, different wings and sections should be parted off for the different categories of prisoners. The two sexes at any rate must be kept distinct. 3rd. The number of stories should not be more than three, including the ground-floor. The parts of the prison specially destined for persons undergoing their sentences should be disposed in such a manner as, 1st. To allow of a complete separation by day as well as by night. 2nd. To give them the means of open air exercise. 3rd. To enable them to be suitably employed; to receive instruction, and to assist at divine service and religious exercises, without infringing the rule of separation. 4th. To facilitate the mode of superintendence of the prisoners, and of frequent communication with them.

The following propositions were read and discussed:—

**Central Observatory.**—The various parts of the building should be connected with a central point of inspection, from which the head of the establishment may inspect, without being under the necessity of moving, all the essential branches of the service. Regard must be had to the internal distribution of the localities, to the arrangement of the galleries, and to the choice of the materials of construction, in order that no material obstacle may thwart that inspection.

**Cells.**—In the disposition and arrangement of the cells, regard must be had to the following conditions:—1. The cells must be large enough to allow of the prisoners taking exercise, carrying on trades, and enjoying sufficient space and air for the preservation of their health. The space should vary from 28 to 35 cubic metres. 2. They should be lighted up, ventilated, and heated in a suitable manner. 3. Their construction should be such as to allow of no communication between their inmates. 4. They should be furnished with bed and bedding, with a fixed washhand basin with a tap, with a water-closet, and with other necessary articles. The prisoners should also have the means of giving the alarm to the attendants in case of illness or accident, or under any circumstance in which their presence might be necessary. 5. The prisoners should be subjected to an easy but unperceived inspection.

**Special Cells.**—In penal prisons it is necessary to have a certain number of special cells for the infirmary, for special punishments, for the different callings, and for prisoners on their first arrival. The cells for infirmaries, chiefly reserved for patients who cannot be suitably attended to in the ordinary cells, should be more spacious than the former, and should be disposed in such a manner as to allow of the free access of the attendants. One cell of that kind for every forty or fifty prisoners would possibly be sufficient. Cells for punishment should be stronger than others, and should be built in such a manner as to be easily darkened,

if necessary. One such cell would be sufficient for about 100 prisoners. The dimensions of the cells for the exercise of certain trades should correspond with the use to which they are to be put. They should be situated in preference on the lower stories, and their number must depend on the nature of the trades carried on in the prison. In prisons where prisoners are constantly arriving, a certain number of cells should be made in which each prisoner may be placed temporarily, previous to being seen by the surgeon, and such cells might be of smaller dimensions than others.

**Heating and Ventilation.**—Whatever the system of ventilating by heating may be, its results should be the following:—A sufficiency to each cell of fresh air, or, if necessary, of air tempered for each prisoner, without the inconvenience of draughts. The extraction from each cell of a quantity of foul air equivalent to the quantity of pure air introduced; and the carrying on of the heating and ventilation without facilitating the means of communication, whether of sound or otherwise, between the different cells.

Mr. Retch said, that excellent as the Pentonville Model Prison was, he could not help saying that many things were wanting to render that establishment perfect. All the medical men to whom he had spoken on the subject were of opinion that the temperature should be lowered by night time. The mode of ventilation was not good in Pentonville, and he would just observe, that if people were satisfied with what was simply good, they would never have better. The question of ventilation was a most important one, particularly for nations which, unlike England, had on colonies in which criminals might be transported, and which were, therefore, under the necessity of detaining the criminals for a long time in prison. It must not be said that there was no way of bringing the fresh air into prisons conducted on the cellular system; but rather urge architects to find out a plan to that effect before the next congress was held. The system of ventilation in Clerkenwell prison had been lately changed, because it was found to be a bad one. Mr. Retch here showed the meeting a plan for procuring a ventilation: the principle appearing to be, that fresh air should be applied from the lower parts of the building, whilst the foul air should escape from the roof of the house. He would just state one fact to show that at Pentonville some improvements were required. About three weeks ago he had been informed by one of the furnace or oven men of that prison, that it required thirty-six hours to lower the temperature.

Col. Jebb admitted that it would be better to admit air into the prisons by means of open windows, but then such windows would admit of communication between the cells. He did not think that the present system at Pentonville could be well changed at present without endangering the health of the inmates. Should the medical men, however, decide otherwise, alterations would be made. He thought that the present mode of ventilation would not act prejudicially on the health of the inmates during the eighteen months or so they remained in the model prison.

The article in favour of the establishment of a central observatory of inspection was adopted, as was also one relating to cells, with the exception of a sentence which fixed their space at from 28 to 35 cubic metres.

The congress also adopted the following propositions:—

**Chapels.**—The chapel should be so disposed as that each prisoner should join in the exercise of worship—seeing and hearing the minister officiate without being himself seen; regard being had at the same time to the fundamental principle of the separation of prisoners amongst themselves.

**Parlours.**—A certain number of cell parlours should be made for the use of prisoners not authorised to meet their relations or friends in their own cells.

**Domestic Service.—Administration.—Lodging of Persons Employed in Prisons.**—Whatever plan may be adopted, independent of the localities above-mentioned, each prison on the cellular system should contain a bath-room, with a number of separate baths, in proportion to the number of inmates; a kitchen with its accessories; a baking-house and a washhouse; a certain number of magazines

for provisions, fuel, clothes, general stores, and manufactured goods, according to the destination of the prison; a clerk's office, and a meeting-room for the committee of surveillance; lodgings for the director or chief officer, the guards, or watchers, and, in penal prisons, for the sub-director, the superintendent of works, the almoner, the doctor or his assistant, and of such other persons as may be placed in each prison by the administration.

In Mr. Cresy's valuable "Encyclopædia of Civil Engineering," a long account is given of the Pentonville Prison (so frequently referred to at the Congress), with numerous illustrations of the fittings. We are permitted to place copies of some of these before our readers, together with the plan of the building (fig. 1), and the following particulars.

The first stone was laid on the 10th of April, 1840, and the whole was completed in the autumn of 1842. It is adapted for the reception of 520 prisoners upon the separate system, each having a cell, 13 feet by 7 feet, and 9 feet in height.

The plan exhibits a central hall, open from the floor to the roof, from which branch five blocks of buildings, each having, on the ground-floor, a corridor, which extends the whole length, with galleries above, in which are the entrances to the cells, arranged on each side against the outer walls. From the central hall the doors of all the cells may be seen, as the galleries are formed of open ironwork. The Eastern Penitentiary at Philadelphia, designed by Mr. Haviland, seems to have been the prototype for this arrangement. As there are no female prisoners, there is but one class of cells.

The boundary wall is upwards of 20 feet in height, and solidly constructed; and on the outside is an open space of considerable width. The basement is not sunk into the earth, except in one portion, where it has an open area: over the whole surface of the walls a course of slate in cement was laid, 6 inches above the ground line, and the walls stand on a bed of concrete, 3 feet in depth and as much in width, so that every precaution is taken to prevent the ascent of moisture. Under the entrance building is a ward for the reception of prisoners, where they are examined by the medical attendant. The access to this ward is from the ground-floor, near the entrance door; and the accommodation consists of a receiving-room, a number of cells in which prisoners can be locked up for twenty-four hours, if necessary, an examining-room, clothing stores, bath, and a closet for fumigating and purifying clothes.

Besides the 520 separate cells, there are twenty others on the basement area as work-shops, &c.; a chapel which contains stalls for 256 prisoners; a board room for the commissioners, A; offices for secretary, B; governor, H; chaplain, D; physician, E; governor's clerks, N, O, P; clerk of works, &c., waiting-room, G; visiting-room for prisoners' friends, LM; schoolmaster's room, library, surgery, offices for the steward and clerk, kitchen, and scullery, stores for provisions, &c., stores for manufactured articles, dwellings for governor, chaplain, assistant-chaplain, steward and manufacturer, principal schoolmaster, clerk of the works, four principal warders, twelve warders, two gate-keepers, one messenger, an engineer, and apartments for the deputy governor, president medical officer, and infirmary warden. The total area, including the boundary wall, is six acres, ten perches. There is a garden of two acres in the rear, and a terrace and road 75 feet broad in front.

The chapel is 72 feet 6 inches in length, 40 feet in width, and 26 feet in height to the under side of the cornice, above which is a coved ceiling. It occupies a portion of the under part of the building, and is entered on the level of the first and second galleries. The rows of seats are so disposed, that the prisoners are effectually separated from each other, whilst at the same time each has a view of the officiating clergyman, and can be seen by the attendant inspector. Each prisoner as he enters closes the door after him, and, when a row is filled, the officer fastens the whole of the doors in the row by a handle and crank.

There are four entrances, and by means of a